Level of Knowledge about Cervical Cancer Risk Factors in Women Presenting with Vaginal Discharge

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Abstract

Objective: The objective of this study was to assess the level of knowledge about the risk factors of cervical cancer in women presenting with vaginal discharge.

Methodology: This cross-sectional study was conducted at Department of Obstetrics & Gynecology, Khyber Teaching Hospital Peshawar. Sample size was 177, using 8% average knowledge about CC, 95% confidence level and 4% margin of error. All female patients 16 to 65 years of age with complaints of vaginal discharge diagnose through history and physical examination presenting to outpatient department of Obs & Gyne C unit of Khyber Teaching Hospital Peshawar were included. All of them were asked 10 multiple choice questions and the patient response was recorded in a pre-design proforma.

Results: A total of 177 patients presenting with vaginal discharge were interviewed. Their age ranges from 16 to 65 year with a mean of 33.47 ± 12.561. All patients were assessed for their level of knowledge regarding risk factors for cervical cancer by asking 10 multiple choice questions from each subject. Patients were categorized into three groups as having good, average and bad knowledge on basis of number of questions answered correctly. Among 177 subjects 1.7 % has well, 16.9 % has average and 81.4 % has poor knowledge.

Conclusion: This study has demonstrated that level of knowledge about risk factors of cervical cancer was very poor among local population visiting the hospitals. Only 1.7 % of study population has good level of knowledge Therefore, there should be comprehensive national cervical cancer screening and awareness program.

Key words: Cervical cancer, level of knowledge, vaginal discharge.

Introduction

Cervical cancer (CC) is second most common cancer among women worldwide[1]. In 2009 approximately 11,270 new cases of invasive CC were diagnosed in United States (US) and it caused 4070 deaths! This represents 1.5 % of cancer deaths in women[2].

CC contributes to loss of over 2.7 million years of life among women between the age of 25 to 64 years worldwide, some 2.4 million in developing and 0.3 million in developed countries[1].The south Asian region harbors one fourth cases of CC[3]. In India alone there are 132,000 new cases and 72,000 deaths related to CC each year[3].

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The situation in Pakistan is largely unknown due to scarcity of epidemiologic data regarding CC and in urban areas it is responsible for 3.6 % deaths[4]. The highest rate of mortality is attributed to late presentation of CC in Pakistan. This discrepancy of mortality rates between developed and developing countries are largely due to widespread institution of CC screening and prevention programs in developed countries.

Many different histopathological types of CC share the same risk factors[5]. They include early onset of sexual activity, multiple sexual partners, a high risk sex partner e.g. promiscuous sexual activity, sex exposure to a partner with Human Pipillomas Virus (HPV) infection, history of STD's, high parity, immunosuppression, low socioeconomic status, prolong use of oral contraceptives. Cigarette smoking is associated with squamous cell carcinoma but not with adenocarcinoma. HPV infection can be found in almost all cases of CC with two most high risk types are HPV 16 and 18[1]. Pap smear screening was first introduce in US in 1941 and has been associated with sustained reduction in CC incidence and mortality. HPV testing has better specificity in women over the age of 30 years[6]. The introduction of vaccines against HPV has been a major advance in CC prevention[1].

In a study conducted among nurses and interns at tertiary care hospital in Karachi revealed that 44 % of both were aware that screening test is available, 78 % knew that infections is one cause of CC, 91 % wanted to knew about vaccine. Sexual practice and multiple partners were the most common risk factors observed among 45 %[7]. A study among adult female at Fatima memorial hospital Lahore in 2008 regarding perceptions of CC screening reported 85% of the participant agreed that screening of cancer improves survival, 36 % had heard of CC, 5 % knew screening is available and 2.6 % had a Pap smear[8]. The most common reason for not having Pap smear was lack of information. In a study conducted among female college students in India the awareness level was ascertain in a scale of 0 to 15 with an average of 8. This study reveals that only 1 % had good knowledge about different aspect of CC, 8 % had average and 91 % had poor knowledge[9]. The objective of this study is to assess the knowledge regarding CC risk factors in a group of population presenting with vaginal discharge to tertiary care hospital. The determining factor of CC outcome in any population depends upon the early cancer detection. To achieve the goal of early detection, to decrease the mortality and the burden of management of advance CC on health care system the primary step is awareness and education of at risk population. The results of this study will provide us with local level of knowledge about CC risk factors. On the basis of results of this study, we can put suggestions to competent authorities about starting CC awareness, screening and vaccination programs. Through this assessment we are hoping to identify ways of improving care of women and help reduce the incidence, prevalence and mortality rates of CC in local population. This study will also help us in understanding the factors associated with underutilization of CC screening programs and thus will increase overall screening rates.

Material and Methods

This cross-sectional (Descriptive) study was conducted at Department of Obstetrics & Gynecology, Khyber Teaching Hospital Peshawar. Sample size was 177, using 8% average knowledge about CC, 95% confidence level and 4% margin of error. All female patients 16 to 65 years of age with complaints of vaginal discharge diagnose through history and physical examination presenting to outpatient department were included. Patients who have histopathologically proven cervical cancer and pregnant women were excluded. All of them were asked 10 multiple choice questions and the patient response was recorded in a pre-design proforma. All patients were interviewed about CC risk factors by the us and a well trained nurse to elaborate questionnaire easily in local language. They were asked to reply with one answer out of four options to all the 10 multiple choice questions in which one option was correct. A total of 10 questions was asked from all patients and they were categorized in one of the three groups on the basis of their knowledge regarding CC risk factors, as having Good (7 or more correct answers out of 10), Average (between 4-6 correct answers out of 10) or Poor knowledge (less than or equal to 3 correct answers out of 10).

All the other mentioned information including answers to all questions and patient's demographic information was recorded in the data collection instrument. Strictly exclusion criteria were followed to control confounders and bias in the study results. Data was entered and analyzed by statistical package for social sciences (SPSS) version 14. Mean + SD was be calculated for numerical variables like age. Frequencies and percentages were calculated for categorical variables like knowledge (good, average and bad). Knowledge was stratified among age of the patient to see the effect modifications. All results were presented as tables and graphs.

Results

A total of 177 patients presenting with vaginal discharge fulfilling the inclusion criteria were interviewed in the outpatient department of Gyne C Unit Khyber Teaching Hospital Peshawar from 21st may 2019 to 26th nov 2019. Their age ranges from 16 to 65 year with a mean of 33.47 ± 12.561. Descriptive statistics of the study population are shown in table 1.

Patients were categorized into three groups as having good, average and bad knowledge on basis of number of questions answered correctly. The frequency and percentages are shown in table 4. Among 177 subjects 1.7 % has good, 16.9 % has average and 81.4 % has poor knowledge. The level of knowledge was cross tabulated against age groups. Results are shown in table 5. Overall, the level of knowledge (*P*=0.008) was good in the younger age groups compare to old age. All 3 subjects with good knowledge were from the young age group.

Level of knowledge was cross tabulated against the education level of the subjects. The results are shown in table 6. Those with higher education have significantly (p= 0.00) high level of knowledge about risk factors of cervical

cancer. Frequency of correct response was also calculated for each risk factor among all 177 subjects. The results are shown in table 7. Out of total participants 29.4 % recognized sexually transmitted infection as a risk factor for cervical cancer

Table 1; DESCRIPTIVE STATISTICS OF STUDY POPULATION (N=177)

Parameter	Mean	Std. deviation	Minimum	Maximum
Age of the patients	33.47	12.561	16	65

Table 4; GRADES OF LEVEL OF KNOWLEDGE

Level of knowledge	Frequency	Percentage
Good (7 to 10)	3	1.7
Average (4 to 6)	30	16.9
Poor (3 or less)	144	81.4
	177	100

Table 5; AGE AND LEVEL OF KNOWLEDGE DISTRIBUTION (N=177)

Age groups	Level of knowledge			
	Good (7 to 10)	Average (4 to 6)	Poor (3 or less)	Total
16 to 30 years	3	20	61	84
31 to 45 years	0	10	49	59
46 to 65 years	0	0	34	34
Total	3	30	144	177

(P= 0.008)

Table 6; LEVEL OF KNOWLEDGE and EDUCATION LEVEL DISTRIBUTION (N=177)

Education level	Level of knowledge			
	Good (7 to 10)	Average (4 to 6)	Poor (3 or less)	Total
Higher Secondry	2	9	0	11
Secondry	1	16	15	32
Primary	0	5	58	63
Illetrate	0	0	71	71
Total	3	30	144	177

(P= 0.00)

Table 7; KNOWLEDGE LEVEL ON CERVICAL CANCER RISK FACTOR

Q #		Correct	Incorrect	Correct %
1	Age of marriage	13	164	7.3
2	First child birth age	11	166	6.2
3	Multiple pregnancies	16	161	9.0
4	Low nutrient diet	29	148	16.4
5	Body habitus	18	159	10.2
6	Addiction	40	137	22.6
7	Socioeconomic	44	133	24.9
8	Family planning	37	140	20.9
9	Infections	52	125	29.4
10	Family history	53	124	29.9

Discussion

This study included 177 consecutive female patients seen in outpatient department with complaints of vaginal discharge fulfilling the inclusion criteria. Our patient's age was in the range of 16 to 65 years. Most of our patients were in the age groups of 16 to 45 years (n=143). The mean age of our patient's was 33.47 ± 12.561. This was in accordance with a study conducted by Tran NT[10], where the mean age was 40.6 and the age range was 23 to 66 years. Then mean age was 25.6 in a study conducted in Karachi by syed faizan ali[7], it was lower because the study population was mainly nursing staff and interns while our study has been done on general population.

The literacy level of our study population was very low, 40 % were illiterate and 36 % had only primary level education. This was in contrast to the level of education of subjects in the study conducted in india by Saha A[9], where all subjects were college students. Similarly the mean education years were 12 in study conducted by Tran NT[10] in People Republic of Korea. While in a study conducted locally by Imam SZ[8] 44 % of women had no formal knowledge. Most of our study population was patients visiting the government hospitals and most of them are from poor socioeconomic status so the literacy level was low. Also Pakistan's literacy rate is low compare to these countries.

The study population has very low level of knowledge about risk factors for cervical cancer. Most of the risk factors were recognized by less than 50 % of the subjects. Only 1.7 % has good, 17 % has average and 82 % has poor level of knowledge. Knowledge was least (6.2%) for 'age of mother at the birth of first child' as risk factor followed by 'age at marriage' (7.3%). The largest proportion (29.9%) recognized 'family history of cervical cancer' as a risk factor compared to their correct responses for other risk factors evaluated. Out of total participants 29.4 % recognized sexually transmitted infection as a risk factor for cervical cancer. A Korean survey by Oh et al[11], found 31.5% women aged more than 20 years to know that sexually transmitted infections (STIs) can cause cervix cancer. 25 % correctly responded to poor socioeconomic status as a risk factor. Smoking was recognized as a risk factor by 22.6% and oral contraceptive pills by 21 %. And 16.4 % correctly responded to a diet low in fresh fruits and vegetables as a risk factor. While in a study by Saha A[9] smoking was recognized as a risk factor by 29 % because smoking prevalence in female is very low in our setup so most of our subjects did not identify it as a risk factor. Marriage at early age was identified as a risk factor by 13 %, in our study it was 7.3 % due to fact that mostly marriages occur at young age here so they did not respond to this as a risk factor. In a Malaysian study women could not identify early onset of sexual intercourse, parity and smoking as risk factor[12].

Multiple pregnancies were correctly identified (15 %) as a risk factor in Indian study. Again, the trend of having many children did not persuade many participants to recognize this as a risk factor. Contraceptive use was a risk factor in 12 % of subject. While in our study the level of knowledge was high, probably as OCP use is not much favored here and people usually link it to illnesses. Diet low in fresh fruits and vegetables was a commonly identified risk factor in both studies. Our analysis showed that participant from younger age groups has better level of knowledge. Also subjects who have higher level of education have better awareness of the risk factor of cervical cancer. Association with age was not significant in Saha A[9] study.

During this study we accessed a population that has not been widely studied for risk factors. The studies we mention were done on female college students, nursing staff and interns. Our study included patients presenting with vaginal discharge as this is the most common symptom of cervical cancer. Our observations lead to conclude that lack of national cervical cancer awareness program resulted in the lack of basic knowledge of important risk factors for cervical cancer.

There are few limitations to our study. The study population was patients presenting to outpatient department. The finding could not be generalized to a larger population as the awareness level may be better in general public due to the fact that usually it's the people from poor socioeconomic status who visits the government hospitals, who have low literacy level as well.

In terms of recommendations there is a need of health promotion campaign on a large scale to educate women and communities about cervical cancer, its risk factor and preventable measures by effective screening. There is need for a country wide strong knowledge about cervical cancer so that general public can easily identify the early symptoms of the disease and take preventive measures.

Conclusion

This study has demonstrated that level of knowledge about risk factors of cervical cancer was very poor among local population visiting the hospitals. Only 1.7 % of study population has good level of knowledge Therefore, there should be comprehensive national cervical cancer screening and awareness program. This should provide basic level of knowledge about cervical cancer, its risk factor and preventive methods. Also, early detection of cancer can reduce disease burden on already overburden hospitals and improve prognosis of these patients.

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